ABSTRACT

~~Closure plug for the sealingly and acoustically dampening closing of a hole in a structural member made of flat material, preferably sheet metal or plastic material, comprising a shank which is adapted to be sealingly inserted into the hole, a radially flange integrally formed to one end of the shank of resilient material, the flange having a radially outwardly oblique or bent portion which sealingly engages an associated surface of the structural member upon deformation when the shank is inserted into the hole, the shaft being retained in the hole by an undercut cooperating with the wall of the hole, wherein the shank in the area of the sealing engagement with the hole has a sealing portion which in the none biased state has a smooth conical outer surface, the outer surface having a diameter which increases towards the flange at least in the area of the sealing engagement, the diameter being further larger than that of the hole and that on the inner side of the juncture of the flange and the shank a free space is provided which extends axially to towards the other end of the shank at least up to the sealing engagement or beyond thereof whereby beneath the flange an annular shank portion is formed and whereby the material of the annular shank portion can be deformed into the free space when the shank is pressed into the hole and the wall of the hole forms an annular groove in the annular portion, the groove defining the undercut.~~

A plug for closing a hole in a structural member includes a shank having an upper end with a recess extending toward the lower end of the shank. The recess divides the upper end into a central portion and an outer, deformable portion radially outwardly spaced from the central portion by the recess. The deformable portion has an engagement region deformable by and sealingly engageable with a wall of the hole when the shank is pressed into and retained by the hole. The flange extends radially outwardly from the outer, deformable portion. The engagement region has an outer diameter larger than an inner diameter of the hole, whereby the material of the engagement region can be deformed into the recess when the shank is pressed into the hole and the wall of the hole forms a groove in the engagement region thereby retaining the shank in the hole.